## memo



Project Name | Library Lake SW Wetland Date | 12-31-2016

To / Contact info | Jane Malischke, Alex Smith, Wisconsin DNR

Cc / Contact info | Tom Schroeder, BDLMD President

From / Contact info | Jay Michels (EOR), Britta Hansen (EOR)

Regarding | Grant Completion

#### **Project Status**

EOR has completed all tasks associated with the Wisconsin DNR Large Scale Planning Surface Water Grant for the Library Lake SW Wetland Project. This memo will report the status and result of each task associated with this grant project and outline the next steps that the Beaver Dam Lake Management District should take in order to complete construction of this project.

## Task 1 - Land Access and Acquisition

After much negotiation with land owners the BDLMD is close to securing ownership of the Witte parcel, at the SW corner of Hwy 48 and 5<sup>th</sup> Avenue in Cumberland. The BDLMD has also reached a verbal agreement for use of a hospital parcel south of the Witte parcel for a stormwater easement to be used for the Library Lake SW Wetland project. This agreement will be formalized after a property survey is completed for the parcel.

### Task 2 – Wetland Investigation

On June 16, 2015 EOR staff performed a wetland delineation on the Witte and hospital parcels Southwest of Library Lake. A single 2.79 acre flow-through wetland was delineated on the project site. The shallow marsh community represented the largest portion of the wetland complex. The parent soil within the wetland was classified as Seelyeville and Cathro Muck, a hydric soil type. See attached Wetland Delineation Report for more information.

#### Task 3 – Geotechnical Investigation

Three soil borings were completed as part of the Phase 1 Environmental Assessment on the Witte Property. See Task 12 for details.

#### Task 4 - Utility Investigation

In Summer and Fall of 2015 EOR staff performed a utility investigation and survey of the storm sewer network along Hwy 48, adjacent to the project site. The information was utilized to create a plan to collect and deliver stormwater to the SW wetland project area, rather than to Library Lake as is the current situation. See attached map of survey data.

#### Task 5 - Topographic Survey

In summer 2015 EOR staff performed a topographic site survey. See attached map of survey data.

#### Task 6 – Watershed Analysis

EOR performed a watershed analysis to determine how much stormwater could be captured and treated at the Library Lake SW Wetland. Two subwatersheds were identified around the area:

```
Library Lake – 6th Street – 8.0 Acres – 72% Impervious
```

Library Lake – 5th Street – 7.3 Acres – 52% Impervious

In all there are just over 15 acres (average impervious of 62%) that could be disconnected and treated at the proposed SW Wetland. See attached map of subwatersheds.

#### Task 7 - Schematic Design

An 80% engineering plan set was created for a wetland complex with pre-treatment unit. A statement of estimated quantities (SEQ) was developed in association with this plan set. See attached plans.

#### Task 8 – Wetland Restoration and Invasive Species Strategy

EOR Biologists who reviewed the wetland determined that the wetland provides a unique educational opportunity given its generally high-quality nature and visibility within the City of Cumberland. While reed canary grass proliferates around the periphery of the wetland, high quality, native species including broad-leaf cattail, black willow, lake sedge, tamarack, and white cedar dominate the shrub-carr and coniferous swamp portion of the wetland. Potential restoration opportunities include prescribed fire to control reed canary grass and common buckthorn removal both within the wetland and surrounding uplands. See attached Buckthorn Fact Sheet from UW Extension for more information on buckthorn control methods. Sustaining a diverse wetland may require additional control over upland land use by maintaining a sufficient buffer to capture excess nutrients and stormwater runoff.

#### Task 9 - BMP Performance Modeling

P8 was used for water quality modeling. According to the model NR 151 rules will be met for TSS (84% removal) and P (55% removal). It was also determined that peak rates will actually increase to the south of the project area and Collingwood Lake, but this is justifiable in this context because historical drainage patterns included the subwatersheds that will be re-directed to the south and away from Library Lake.

#### Task 10 – Lake Water Quality Modeling

EOR staff created a BATHTUB model to predict the SW Wetland project's impact on Library Lake. BATHTUB predicted a 39% improvement (reduction) in in-lake TP concentration for Library Lake.

#### **Task 11 – Coordination and Management**

All work was managed in accordance with WI-DNR grant rules.

#### Task 12 - Phase 1 Environmental Assessment

EOR conducted a Phase 1 Environmental Site Assessment on the Witte Property in May 2016. No environmental conditions were found for the property. EOR also collected soil samples from three soil borings on site. The samples were analyzed for volatile organic compounds (VOCs), including

compounds often associated with petroleum products and solvents used by vehicle repair shops. No VOCs were detected in the samples. See attached lab report and Phase I Environmental Assessment Report.

\_\_\_\_\_

#### **Next Steps**

The next step to completing construction of the Library Lake SW Wetland is to apply for a Land Acquisition grant from the Wisconsin DNR for the Witte property. The hospital has already agreed to give a parcel of their land in exchange for future credits toward development at the top of the watershed. The Wisconsin DNR has approved this arrangement. Formalization of this agreement will require a legal description and a survey of the property, which are currently in process. Once both of these parcels are officially obtained the BDLMD should apply for a water quality improvement grant to build the wetland complex. Some final engineering work will be required to develop the 80% plan set into 100% complete construction documents.

Proposed Project Schedule (Contingent on Funding)						
Plan Updates and Bid Package	Apr-June 2017					
Bid Letting	Apr-June 2017					
Award Contract	Jul-Sep 2017					
Project Construction	Jul-Sep 2017					
Final Planting	Oct-Dec 2017					

p: 651.770.8448 f: 651.770.2552 www.eorinc.com

#### INTRODUCTION

The City of Cumberland, Wisconsin is supporting the efforts of the Beaver Lake Dam Management District in pursuing a grant to improve water quality in Beaver Dam Lake. The grant funds will be used to create a stormwater treatment facility south of Library Lake.

#### **Purpose of Review**

The purpose of this report is to document the boundaries of wetland resources at the proposed stormwater treatment facility location south of Library Lake (Figure 1). This report has been prepared to facilitate a wetland boundary and type determination by the wetland regulatory agencies.

#### **Review Team Qualifications and Contact Information**

The wetland delineation was performed on June 16<sup>th</sup>, 2015 by Jason Naber of Emmons & Olivier Resources (EOR), Minnesota Wetland Delineation Certification #1254.

Wetland Delineators: Jason Naber, WDC #1254

Emmons & Olivier Resources, Inc. (EOR) 651 Hale Ave N. Oakdale, MN 55128 651-203-6028 jnaber@eorinc.com

<u>Delineation Prepared for:</u>
Beaver Lake Dam Management
District
1870 Hines Lakeview Drive
Cumberland, WI 54829
(715) 822-2699

## **Site Location and Description**

The project is located in Section 7, T35N, R13W within the City of Cumberland, Barron County, Wisconsin. The Beaver Lake Dam Management District is the Local Governing Unit for the Wetland Conservation Act.

#### **METHODOLOGY**

#### **Preliminary Investigation**

Prior to conducting the field wetland delineation, existing data and available maps were compiled and reviewed. Topographic maps (Figure 2), Wisconsin Wetland Inventory (WWI) (Figure 4), and WI DNR Public Waters (Figure 5) maps were reviewed to determine likely locations of existing wetlands. NRCS SSURGO soils were compiled using the Web Soil Survey site to determine potentially hydric soils in the project area (Figure 3). Lastly, precipitation data from the United States Department of Agriculture Regional Climate Center for Cumberland, Wisconsin was reviewed to determine how current precipitation at the site compares to normal conditions (Appendix E).

#### **Wetland Delineation Methods**

The methodology of the 1987 Corps of Engineers Wetland Delineation Manual and regional supplements for the Northcentral and Northeast Region were used to delineate wetlands within the project area. The wetland delineation was conducted on June 16<sup>th</sup>, 2015. Figure 6 shows locations of sampling points.

Two wetland-upland transects were conducted on the site. Wetland observation and upland observation points were established, and the Wetland Determination Data Form – Northcentral and Northeast Region was completed. Completed field data forms are attached in Appendix C. All sample points were recorded

for map preparation using a submeter differential Global Positioning System (GPS) and transferred to ArcMap v. 10.1 Geographic Information System (GIS). Photos for the sample points are in Appendix D.

#### Vegetation

Two sample points were established within the wetland plant communities encountered at the site and two additional sample points within the upland plant communities. At the pit locations, all observable species were assigned scientific names to allow for wetland indicator status determination. Literature used for nomenclature and identification are listed in References. The wetland probability indicator status of dominant plant species was determined using the 2014 National Wetland Plant List v3.2.

#### Soils

Soil samples were collected using a trenching shovel and pits were dug to a minimum of 24 inches. Soil colors were determined using the Munsell Soil Color Charts. Primary and secondary indicators followed the Natural Resources Conservation Service Field Indicators of Hydric Soils. Soils were described to include those hydric indicators immediately below the A-horizon. The hydric soil determination was then made based upon soil pit characterization, soil order, ponding, and flooding.

#### Hydrology

As required in the 1987 Manual, the presence of subsurface hydrology or indicators thereof was characterized in the rooting zone. Comments are on data sheets about any absence or marginal presence of hydrology on the date of delineation and the professional judgment used to make a hydrology determination at the point.

#### **Delineation Boundary Determination**

The boundary was determined after taking into consideration the parameters of soil, hydrology, vegetation, topography, and professional judgment at paired upland and wetland sample points. Boundary point locations were field-flagged at sufficient intervals, depending on curvature.

#### **RESULTS AND DISCUSSION**

#### **Description of Field Conditions**

The delineation was performed June 16th, 2015. Weather conditions were clear at the time of the delineation and site conditions were normal. The previous three months during the growing season included one month with above normal precipitation and two months with normal precipitation totals. See Appendix E for precipitation information.

Topography within the vicinity of the project is comprised of a flow through wetland that is situated in a depression between uplands to the east and west (Figure 2) and lakes to the north (Library Lake) and south (Collingwood Lake). Vegetation within the project area is comprised of native and non-native species.

The upland soils within the project area are comprised of Chetek sandy loams on lands with two to twelve percent slope. The parent soil within the wetland is classified as Seelyeville and Cathro Muck with zero to one percent slope. Seelyeville-Cathro Muck is classified as a hydric soil (Table 1; Figure 3).

Table 1. Soils within project vicinity

Soil symbol	Soil Name Surface texture		Depth to Water Table	Slope
Sm	Seelyeville-Cathro	Muck	0 cm	0-1%,
CkB	Chetek	Sandy Loam	>180	2-6%
CkB2	Chetek Eroding	Sandy Loam	>180	6-12%

#### Wetlands

A single 2.79 acre wetland complex was delineated at the project site (Figure 6). The wetland complex is comprised of three distinct communities as described below (Table 2). The shallow marsh community (wetland #1) represents the largest portion of the wetland complex. Reed Canary Grass (*Phalaris arundinacea*) and Broadleaf Cattail (*Typha latifolia*) are the dominant plant species within wetland community #1. Black Willow (*Salix nigra*) and Lake Sedge (*Carex lacustris*) are the dominant plant species within wetland community #2, while Tamarack (*Larix laricina*) and White Cedar (*Thuja occidentalis*) were the most dominant in wetland community #3. Common Buckthorn (*Rhamnus cathartica*), Box Elder (*Acer negundo*), Cottonwood (*Populus deltoides*) and Tatarian honeysuckle (*Lonicera tatarica*) were the most dominant species on the adjacent uplands.

Wetland hydrology was met through Hydrology Indicator "High Water Table (A2)" and "Saturation (A3)" at both wetland pits. Primary Indicators of wetland hydrology were not identified at either of the upland pits.

Hydric soil indicators were met within the delineated wetland basin at both wetland pits. Hydric soil was met at pit #1 through Hydric Soil Indicator "Depleted Below Dark Surface (A11)" (Figure 3). Hydric soil was met at pit #3 through Hydric Soil Indicator "Depleted Matrix (F3)":

**Table 2. Wetland Types** 

	Wet	Acres	
Wetland ID	Circular 39 / NWI	Eggers and Reed	Delineated
Wetland			
Community #1	Type 3 / PEMb	Shallow Marsh	1.39
Wetland			
Community #2	Type 6 / PSSc	Shrub-Carr	1.12
Wetland			
Community #3	Type7 / PFOc	Coniferous Swamp	0.28
	Total ar	ea of wetland delineated	2.79

#### **REFERENCES**

Eggers, Steve D. and D. Reed. <u>Wetland Plants and Communities of Minnesota and Wisconsin.</u> U.S. Army Corps of Engineers, St. Paul District. St. Paul, MN. 1997. 263pp.

Minnesota Climatology Working Group. Wetland Delineation Monthly Precipitation Data from Gridded Database. <a href="http://climate.umn.edu/gridded\_data/precip/wetland/wetland.asp">http://climate.umn.edu/gridded\_data/precip/wetland/wetland.asp</a>

Ownbey, Gerald B. and T. Morley. <u>Vascular Plants of Minnesota: A Checklist and Atlas.</u> University of Minnesota Press, Minneapolis MN. 1991. 306pp.

Tiner. R.W. 2003. Dichotomous Keys and Mapping Codes for Wetland Landscape Position, Landform, Water Flow Path, and Waterbody Type Descriptors. U.S. Fish and Wildlife Service, National Wetlands Inventory Program, Northeast Region, Hadley, MA. 44 pp.

- USDA, NRCS. 2003. Field Indicators of Hydric Soils in the Unites States, Version 5.01. G.W. Hurt, P.M Whited, and R.F. Pringle (eds). USDA, NRCS in cooperation with the National Technical Committee for Hydric Soils, Fort Worth, TX.
- USACE. 2014. National Wetlands Plant List v3.2. <a href="http://rsgisias.crrel.usace.army.mil/NWPL/">http://rsgisias.crrel.usace.army.mil/NWPL/</a>
- USACE. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral – Northeast Region (Version 2.0)

#### APPENDIX A: WETLAND PLANT INDICATOR CLASSES

Obligate Wetland (OBL) Species occurs almost always (estimated probability >99%) in

wetlands under natural conditions.

Facultative Wetland (FACW) Species usually occurs in wetlands (estimated probability 67 to

99%) but occasionally found in non-wetlands.

Facultative (FAC) Species equally likely to occur in wetlands and non-wetlands

(estimated probability 34 to 66%).

**Facultative Upland (FACU)** Species usually occurs in non-wetlands (estimated probability 67

to 99%) but occasionally is found in wetlands (estimated

probability 1 to 33%).

Obligate Upland (UPL) Species occurs in wetlands in other region but, under normal

conditions, occur almost always (estimated probability >99%) in non-wetlands within the region specified. Species that do not occur in wetlands in any region are not found on the National

List.

**No Indicator Status (NI)** Insufficient information available to establish indicator status.

## **APPENDIX B: FIGURES**

Figure 1. Site location



Figure 2. Topography

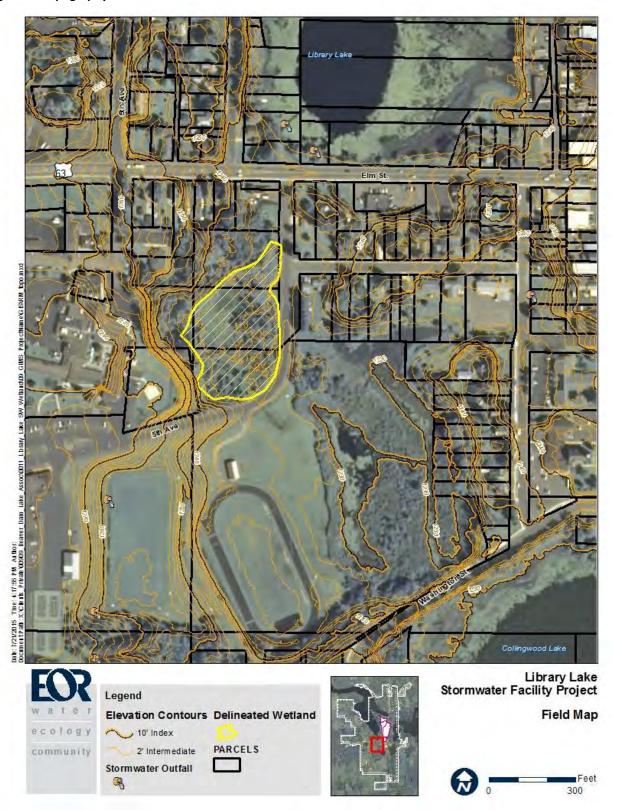


Figure 3. Soils



Figure 4. Wisconsin Wetlands Inventory

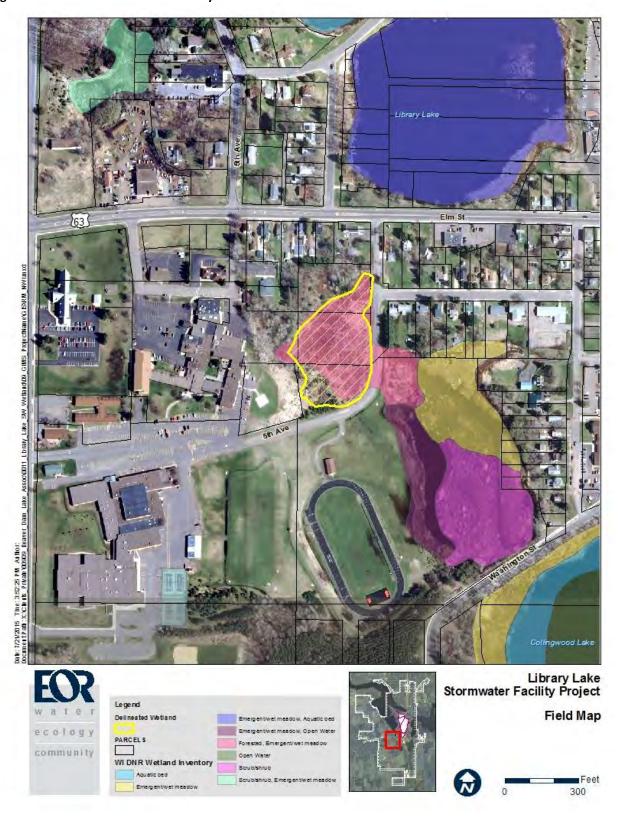


Figure 5. WI DNR Protected Waters

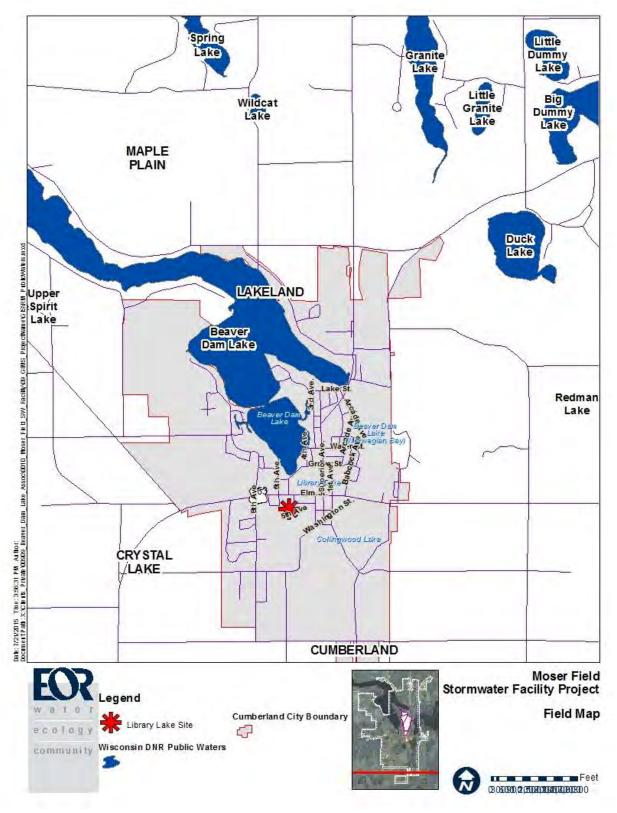
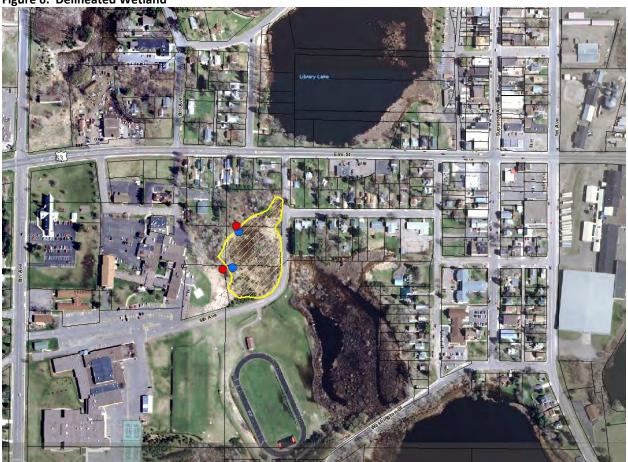


Figure 6. Delineated Wetland



## **APPENDIX C: WETLAND DATA SHEETS**

oil Map Unit Name e climatic/hydrologic conditions of the site typical for e vegetation , soil , or hydrologic e vegetation , soil , or hydrologic	District	
Indform (hillslope, terrace, etc.):  ope (%):  Dil Map Unit Name  de climatic/hydrologic conditions of the site typical for e vegetation  de vegetation  soil  or hydrologic e vegetation  soil  or hydrologic e vegetation	Local relief ong:: Dat	, Township, Range: (concave, convex, none): um:
Indform (hillslope, terrace, etc.):  ope (%):  Dil Map Unit Name  de climatic/hydrologic conditions of the site typical for e vegetation  de vegetation  soil  or hydrologic e vegetation  soil  or hydrologic e vegetation	Local relief ong:: Dat	(concave, convex, none):
oil Map Unit Name e climatic/hydrologic conditions of the site typical for e vegetation , soil , or hydrologic e vegetation , soil , or hydrologic	ong::Dat	um:
e climatic/hydrologic conditions of the site typical for evergetation soil or hydrologic everg	or this time of the year?	The state of the s
re vegetation, soil, or hydrology re vegetation, soil, or hydrology	or this time of the year?	NVVI Classification:
e vegetation , soil , or hydrology		(If no, explain in remarks)
	ynaturally problemati	c? circumstances" present?
needed, explain any answers in remarks)		
UMMARY OF FINDINGS		
/drophytic vegetation present?	is the sampled area w	ithin a wetland?
/dric soil present? N	a series materials as	
dicators of wetland hydrology present? N	If yes, optional wetland	site ID:
emarks: (Explain alternative procedures here or in a	a separate report.)	
Date of the Control o		
YDROLOGY		
		Secondary Indicators (minimum of two
imary Indicators (minimum of one is required; chec		required)
	r-Stained Leaves (B9)	Surface Soil Cracks (B6)
	tic Fauna (B13)	Drainage Patterns (B10)
	Deposits (B15)	Moss Trim Lines (B16)
	ogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
	zed Rhizospheres on Living	Crayfish Burrows (C8)
- Transfer of the control of the con	s (C3)	Saturation Visible on Aerial Imagery
	ence of Reduced Iron (C4)	(C9) Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Soils	nt Iron Reduction in Tilled	Geomorphic Position (D2)
The state of the s	Muck Surface (C7)	Shallow Aguitard (D3)
	r (Explain in Remarks)	FAC-Neutral Test (D5)
Surface (B8)	A VENEZULU A LEISENDEA	Microtopographic Relief (D4)
eld Observations:		
urface water present? Yes No	Depth (inches):	Indicators of
ater table present? Yes No	Depth (inches):	wetland
aturation present? Yes No	Depth (inches):	hydrology
cludes capillary fringe)		present? N
escribe recorded data (stream gauge, monitoring w	ell, aerial photos, previous insp	pections), if available:
and the control of th		
emarks:		

Sampling Point:		
50/20 Thresholds		
Dominant Indicator 2	20%	50%
Species Status Tree Stratum	19	48
Y FAC Sapling/Shrub Stratum	20	50
	16	41
	0	0
N FAC Woody Vine Stratum	Ü	U
Dominance Test Worksheet		
Number of Dominant		
Species that are OBL,		
FACW, or FAC:	4	(A)
Total Number of Dominant		_y,
Species Across all Strata:	6	701
	0	(B)
otal Cover Percent of Dominant		
Species that are OBL.		
Dominant Indicator FACW, or FAC: 6	36.67%	(A/B
Species Status		
Y FAC Prevalence Index Worksheet		
Y FACU Total % Cover of:		
OBL species 20 x 1 =	20	
FACW species 0 x 2 =	0	_
	-	_
FAC species 205 x 3 =	615	
FACU species 52 x 4 =	208	
UPL species 0 x 5 =	0	311
Column totals 277 (A)	843	(B)
Prevalence Index = B/A =	3.04	
Freverence mack - bits -	0.04	_
otal Cover		
Hydrophytic Vegetation India	ators:	
Dominant Indicator Rapid test for hydrophytic v	/egetati	on
Species Status X Dominance test is >50%		
Y FAC Prevalence index is ≤3.0*		
	5555	
The production of		
N FACU supporting data in Remarks	s or on	а
N FACU separate sheet)		
N FACU Problematic hydrophytic ve	getatio	n*
(explain)		
	n i sellen kerinsi	Continue of
*Indicators of hydric soil and wetland it present, unless disturbed or problems		A LORRER TO
bresellt, dillegs distribed di biopiellia	nic.	
Definitions of Vegetation Stra	ata:	
SEC. W. A. COLOR & C. Bry J. CO.		n.Car
Tree Woody plants 3 in (7.6 cm) or	more in c	liam eter
threath freight (DBH), regardless of her	grit	
No. 10 California and	and the	minute and
Sapling/shrub - Woody plants less th	an San L	DEH BI
greater than 3.28 ft (1 m) tall.		
otal Cover	antin or	namile of
Herb All herbeceous (non woody) pl		araies \$
Dominant Indicator size, and woody plants less than 3.28	it tall	
0	216.45	70.6%
woody villes will workly villes greate	ar man a	20 H In
holght		
Hydrophytic		
vegetation		
otal Cover present? Y		
vege	etation	etation

Double	Matrix	De to th		ox Fea		nicical	or or confirm the abse	rice of indicators.)
Depth Matrix (Inches) Color (moist) %			Color (moist)	ox rea	Type*	Loc**	Texture	Remarks
0-2	10YR 3/2	100	Sold (mole) 10 Type 200			200	Loam	
2-6	10YR 4/3	100					Sandy Loam	1
6-12	10YR 4/2	100				3.1.3	Silt	Thin Layers
12-22	10YR 4/4	100			11	4-1	Sand	
7,81,616			)					
				-		3		
					-	5 = 1		
				-	10.00	5		
					14-00	1		
					14	1		
	1		- /			1-1-1		-1
				-	11.9	4-1		
				d Matr	ix, CS=C	overed o	or Coated Sand Grain	is
1	PL=Pore Lining,	M=Mat	tnx					Y-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
lydric Soi	I Indicators:						Indicators for Pi	roblematic Hydric Solls:
116	time I / A d V		Date	wali ia i	Dalain Or		S con Much //	A10) (LRR K, L, MLRA 149B
	tisol (A1)			100	Below St			Redox (A16) (LRR K, L, R)
	tic Epipedon (A2	1			R, MLRA			
	ck Histic (A3)	. 30			Surface (			Peat or Peat (S3) (LRR K, L, R)
	drogen Sulfide (A				LRA 149		Dark Surface	(S7) (LRR K. L
	- Pretional Laborator CAL							
	atified Layers (A			my Mu	cky Mine	ral (F1)		low Surface (S8) (LRR K, L)
	atmed Layers (A: pleted Below Da		ce (A11) (LR	RK, L	)		Thin Dark Su	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L)
De		rk Sufac	ce (A11) (LR	RK, L			Thin Dark Su	low Surface (S8) (LRR K, L)
— De Thi	pleted Below Da	rk Sufac (A12)	ce (A11)(LR Loa	RK, L my Gle	)	rix (F2)	Thin Dark Su Iron-Mangan	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L)
— De Thi — Sa Sa	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr	rk Sufac (A12) al (S1)	ce (A11)(LR Loa Dep	R K, L my Gle bleted N	) yed Mati	rix (F2)	Thin Dark Su Iron-Mangan Piedmont Flo	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R
— De Thi — Sa Sa	pleted Below Da ck Dark Surface ndy Mucky Miner	rk Sufac (A12) al (S1)	ce (A11)(LR Loa Dep Rec	R K, L my Gle bleted M lox Dar	) yed Mati Natrix (F3	rix (F2) 3) e (F6)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodio	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149)
De Thi Sa Sa Sa	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr	rk Sufac (A12) ral (S1) ix (S4)	ce (A11)(LR Loa Per Dep	R K, L my Gle bleted N lox Dar bleted D	yed Mati Matrix (F3 k Surface	rix (F2) 3) e (F6) ace (F7)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodio Red Parent N	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R bodplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 149E
De Thi Sa Sa Sa Str	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5)	rk Sufac (A12) ral (S1) ix (S4)	ze (A11) (LR Loa Dep Rec Dep Rec	R K, L my Gle bleted N lox Dar bleted D	) yed Matr Matrix (F3 k Surface Dark Surf	rix (F2) 3) e (F6) ace (F7)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodio Red Parent N Very Shallow	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R bodplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 1498 Material (F21)
De Thi Sa Sa Str Da 145	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 98)	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodio Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R codplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 1498 Material (F21) / Dark Surface (TF12) in in Remarks)
De Thi Sa Sa Str Da 145	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 98)	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodio Red Parent N Very Shallow	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R codplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 1498 Material (F21) / Dark Surface (TF12) in in Remarks)
De Thi Sa Sa Sa Str Da	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 98)	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodio Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R codplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 1498 Material (F21) / Dark Surface (TF12) in in Remarks)
De Thi Sa Sa Sa Str Da 148	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 9B) of hydrophytic ve	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodio Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R codplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 1498 Material (F21) / Dark Surface (TF12) in in Remarks)
De Thi Sa Sa Sa Str Da 149	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 98)	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodic Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R codplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 1498 Material (F21) v Dark Surface (TF12) in in Remarks) r problematic
De Thi Sa Sa Sa Str Da 149 Indicators Restrictive	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 9B) of hydrophytic vo Layer (if observe	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodio Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R codplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 1498 Material (F21) v Dark Surface (TF12) in in Remarks) r problematic
De Thi Sa Sa Sa Str Da 149	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 9B) of hydrophytic vo Layer (if observe	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodic Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R codplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 1498 Material (F21) v Dark Surface (TF12) in in Remarks) r problematic
De Thi Sa Sa Sa Str Da 149 Indicators Restrictive	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 9B) of hydrophytic vo Layer (if observe	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodic Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R codplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 1498 Material (F21) v Dark Surface (TF12) in in Remarks) r problematic
De Thi Sa Sa Sa Str Da 149 Indicators Restrictive Type:	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 9B) of hydrophytic vo Layer (if observe	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodic Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R codplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 1498 Material (F21) v Dark Surface (TF12) in in Remarks) r problematic
De Thi Sa Sa Sa Str Da 149 Indicators Restrictive Type:	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 9B) of hydrophytic vo Layer (if observe	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodic Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R odplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 149) Material (F21) / Dark Surface (TF12) in in Remarks) r problematic
De Thi Sa Sa Sa Str Da 149 Indicators Restrictive Type:	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 9B) of hydrophytic vo Layer (if observe	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodic Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R odplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 149) Material (F21) / Dark Surface (TF12) in in Remarks) r problematic
De Thi Sa Sa Sa Str Da 149 Indicators Restrictive Type:	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 9B) of hydrophytic vo Layer (if observe	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodic Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R odplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 149) Material (F21) / Dark Surface (TF12) in in Remarks) r problematic
De Thi Sa Sa Sa Str Da 149 Indicators Restrictive Type:	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 9B) of hydrophytic vo Layer (if observe	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodic Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R odplain Soils (F19) (MLRA 149 c (TA6) (MLRA 144A, 145, 149E Material (F21) v Dark Surface (TF12) in in Remarks) r problematic
De Thi Sa Sa Sa Str Da 149 Indicators Restrictive Type:	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 9B) of hydrophytic vo Layer (if observe	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodic Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R odplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 149) Material (F21) / Dark Surface (TF12) in in Remarks) r problematic
De Thi Sa Sa Sa Str Da 145 Indicators Restrictive Type:	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 9B) of hydrophytic vo Layer (if observe	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodic Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R odplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 149) Material (F21) / Dark Surface (TF12) in in Remarks) r problematic
De Thi Sa Sa Sa Str Da 149 Indicators Restrictive Type:	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 9B) of hydrophytic vo Layer (if observe	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodic Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R odplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 149) Material (F21) / Dark Surface (TF12) in in Remarks) r problematic
De Thi Sa Sa Sa Str Da 149 Indicators Restrictive Type:	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 9B) of hydrophytic vo Layer (if observe	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodic Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, R odplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 149) Material (F21) / Dark Surface (TF12) in in Remarks) r problematic
De Thi Sa Sa Sa Str Da 14st ndicators restrictive ype:	pleted Below Da ck Dark Surface ndy Mucky Miner ndy Gleyed Matr ndy Redox (S5) ipped Matrix (S6 rk Surface (S7) ( 9B) of hydrophytic vo Layer (if observe	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ce (A11) (LR Loa Dep Reco	R K, L my Gle bleted M dox Dar bleted D dox Der	) yed Matr Matrix (F3 k Surface Dark Surf Dressions	rix (F2) 3) e (F6) ace (F7) s (F8)	Thin Dark Su Iron-Mangan Piedmont Flo Mesic Spodic Red Parent N Very Shallow Other (Explai	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) ese Masses (F12) (LRR K, L, F odplain Soils (F19) (MLRA 145 c (TA6) (MLRA 144A, 145, 149 Material (F21) v Dark Surface (TF12) in in Remarks) r problematic

	Investigator(s): Jason Naber, Mike Majer Landform (hillslope, terrace, etc.):	anagement Distric			and / Barro S		0.10
Local relief (concave, convex, none): islope (%) Lat: -92.026 Long: 46.531 Datum: Soil Map Unit Nam; ver climatic/hydrologic conditions of the site typical for this time of the year? If needed, explain any answers in remarks)  SUMMARY OF FINDINGS  Hydrophytic vegetation present? Hydric soil present? Hydric soil present?  Hydrophytic vegetation present?  N	Landform (hillslope, terrace, etc.):	anagement Distric	t	State: \	Visconsin	Sampling Point	T2P4
Sicipa (%)   Lat: 92.026   Long: 45.531   Datum   Social Map Unit Nams   Social Map Unit		ski					
Soli Map Unit Name  (re climatic/hydrologic conditions of the site typical for this time of the year?  (re vegetation, soil, or hydrology	Slope (%): Lat.: -92.026					nvex, none):	
Are climatic/hydrologic conditions of the site typical for this time of the year?  Are vegetation, soil, or hydrology		Long	45.531	Datu			
Are "normal circumstances" present? Are "normal circumstances" present? Are "normal circumstances" present? Are "normal circumstances" present? Are vegetation in soil or hydrology naturally problematic? Are "normal circumstances" present? Are vegetation present?  Adviction any answers in remarks)  SUMMARY OF FINDINGS  Adviction present?  Adviction present?  Adviction present?  Adviction present?  Andicators of wetland hydrology present?  Are "normal circumstances" present? Normal circumstances present? Normal circumstances present? Normal circumstances present? Normal circumstances present?  Adviction present?  Adviction present?  Adviction present?  Adviction present present?  Adviction present present present?  Adviction present p							
Are vergetation soil or hydrology naturally problematic? circumstances" present? If needed, explain any answers in remarks)  SUMMARY OF FINDINGS  Hydrophytic vegetation present? Yelydro soil present? Not present not present? Not present? Not present not present? Not present not present? Not present? Not present not present? Not present? Not present not present? Not							
SUMMARY OF FINDINGS  Hydrophytic vegetation present? Hydric soil present? Indicators of wetland hydrology present?  Notice Water (Explain alternative procedures here or in a separate report.)  HYDROLOGY  Primary indicators (minimum of one is required, check all that apply) Surface Water (A1) High Water Table (A2) High Water Table (A2) Saturation (A3) Meri Deposits (B15) Most Time (B16) Most Mark (B17) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Inundation Visible on Aerial Inundation Present? Vegetated Concave Other (Explain in Remarks) Surface (B8)  Depth (inches): Microtopographic Relief (D4)  Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Hydrophytic vegetation present?  Hydrophytic vegetation present?  Hydrophytic vegetation present?  N  If yes, optional wetland site ID:    Secondary Indicators (minimum of one is required; check all that apply)			naturally	problematio	? 0	ircumstances" preser	nt?
Hydrophytic vegetation present? Hydrophytic vegetation present? Indicators of wetland hydrology present? Note a separate report.  Note a separate	If needed, explain any answers in remar	rks)					
Hydrophytic vegetation present? Hydrophytic vegetation present? Indicators of wetland hydrology present? Note a separate report.  Note a separate	SUMMARY OF FINDINGS						
HYDROLOGY  Remarks: (Explain alternative procedures here or in a separate report.)  HYDROLOGY  Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Saturation (A3) High Water Table (A2) Saturation (A3) Mari Deposits (B15) Moss Trim Lines (B16) Sediment Deposits (B2) Oxidized Rhizospheres on Living Crayfish Burrows (C8) If to Deposits (B3) Roots (C3) Roots (C3) Saturation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface Water present? Surface (B8)  Oxidized Rhizospheres Other (Explain in Remarks)  Depth (Inches): Surface water present? Yes No Depth (Inches): Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Sescondary Indicators (minimum of two required) Secondary Indicators (main may required) Secondary Indicators (minimum of two required) Secondary Indicators (main may required) Secondary Indicators (minimum of two required Secondary Indicators (Minimum of two required (Minimum of two re			na V 3	F 1. 2	72.14		
Articlators of wetland hydrology present?  N If yes, optional wetland site ID:    Primary Indicators (minimum of one is required; check all that apply)		- Y	is the sample	ed area wit	thin a wetla	nd? N	-
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Water (A2) Aquatic Fauna (B13) Saturation (A3) Mari Deposits (B15) Water Marks (B1) Primary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Saturation (A3) Mari Deposits (B15) Mari Deposits (B15) Sediment Deposits (B2) Oxidized Rhizospheres on Living Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B3) Roots (C3) Algal Mat or Crust (B4) Iron Deposits (B5) Recent Iron Reduction in Tilled Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8)  Other (Explain in Remarks) Surface (B8)  Microtopographic Relief (D4)  Depth (Inches): Indicators of Water table present? Yes No Depth (Inches): Indicators of Wetland hydrology present? N Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			If was options	I wetland s	ite ID		
HYDROLOGY  Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B8) Primary Indicators (minimum of two required) Surface Water (A1) Water Table (A2) Saturation (A3) Mari Deposits (B13) Saturation (A3) Mari Deposits (B15) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Inundation Visible on Aerial Inundation Visible	haladoro or woulding hydrology procent:		ii yoo, opalone	ii woodiid c	10.		
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Water (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) Mari Deposits (B15) Moss Trim Lines (B16) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Drift Deposits (B3) Roots (C3) Fresence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) Inundation Visible on Aerial Inagery (B7) Sparsely Vegetated Concave Surface (B8) Surface (B8) Surface Water Table (C2) Shallow Aquitard (D3) Sparsely Vegetated Concave Surface water present? Surface water present? Yes No Depth (inches): Indicators of Wetland Saturation present? Yes No Depth (inches): Indicators of Wetland Saturation present? N Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Remarks: (Explain alternative procedure	s here or in a sepa	rate report.)				
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Water (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) Mari Deposits (B15) Moss Trim Lines (B16) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Drift Deposits (B3) Roots (C3) Fresence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) Inundation Visible on Aerial Inagery (B7) Sparsely Vegetated Concave Surface (B8) Surface (B8) Surface Water Table (C2) Shallow Aquitard (D3) Sparsely Vegetated Concave Surface water present? Surface water present? Yes No Depth (inches): Indicators of Wetland Saturation present? Yes No Depth (inches): Indicators of Wetland Saturation present? N Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Water (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) Mari Deposits (B15) Moss Trim Lines (B16) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Drift Deposits (B3) Roots (C3) Fresence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) Inundation Visible on Aerial Inagery (B7) Sparsely Vegetated Concave Surface (B8) Surface (B8) Surface Water Table (C2) Shallow Aquitard (D3) Sparsely Vegetated Concave Surface water present? Surface water present? Yes No Depth (inches): Indicators of Wetland Saturation present? Yes No Depth (inches): Indicators of Wetland Saturation present? N Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Water (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) Mari Deposits (B15) Moss Trim Lines (B16) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Drift Deposits (B3) Roots (C3) Fresence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) Inundation Visible on Aerial Inagery (B7) Sparsely Vegetated Concave Surface (B8) Surface (B8) Surface Water Table (C2) Shallow Aquitard (D3) Sparsely Vegetated Concave Surface water present? Surface water present? Yes No Depth (inches): Indicators of Wetland Saturation present? Yes No Depth (inches): Indicators of Wetland Saturation present? N Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Water (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) Mari Deposits (B15) Moss Trim Lines (B16) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Drift Deposits (B3) Roots (C3) Fresence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface Water (B8) Surface (B8)  Tin Muck Surface (C7) Surface (B8)  Thin Muck Surface (C7) Surface Water Table (D4)  FAC-Neutral Test (D5) Surface Water present? Yes No Depth (inches): Indicators of Wetland Saturation present? Yes No Depth (inches): Indicators of Wetland Aydrology Includes capillary fringe)  Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Water (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) Mari Deposits (B15) Moss Trim Lines (B16) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Drift Deposits (B3) Roots (C3) Fresence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface Water (B8) Surface (B8)  Tin Muck Surface (C7) Surface (B8)  Thin Muck Surface (C7) Surface Water Table (D4)  FAC-Neutral Test (D5) Surface Water present? Yes No Depth (inches): Indicators of Wetland Saturation present? Yes No Depth (inches): Indicators of Wetland Aydrology Includes capillary fringe)  Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	HYDBOLOCY						
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) Meri Deposits (B15) Moss Trim Lines (B16) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Drift Deposits (B2) Drift Deposits (B3) Agail Mat or Crust (B4) Iron Deposits (B5) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) Inundation Visible on Aerial Inundation Visible on Aerial Inundation Visible on Aerial Inundation Visible on Aerial Sparsely Vegetated Concave Surface (B8)  Thin Muck Surface (C7) Shallow Aquitard (D3) Sparsely Vegetated Concave Surface (B8)  Teled Observations: Surface water present? Ves No Depth (inches): Indicators of Water table present? Ves No Depth (inches): Depth (inches): Indicators of Wetland hydrology present? N  Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	HTDROLOGT				District de	we had a said the said of the	
Surface Water (A1)	Salara and Carifford and Amelia and Carifford and Cariffor	arrian de alemate a li di	and the state of the last			A THEORY OF THE PARTY OF THE PA	III OF IMO
High Water Table (A2) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)  Field Observations: Surface water present? Surface water present? Saturation present? Yes No Depth (inches): Sediment Deposits (B10) Marl Deposits (B15) Marl Deposits (B15) Application Visible on Aerial Imagery Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Sparsely Vegetated Concave Surface (B8)  FAC-Neutral Test (D5) Microtopographic Relief (D4)  Field Observations: Surface water present? Set No Depth (inches): Set Set Saturation present? Set Saturation present. Set Saturation pres						the state of the s	
Saturation (A3)  Marl Deposits (B15)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial  Imagery (B7)  Sparsely Vegetated Concave  Surface (B8)  Surface (B8)  Surface (B8)  Surface water present?  Yes  No  Depth (inches):  Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Moss Trim Lines (B16)  Dry-Season Water Table (C2)  Dry-Season Water Table (C2)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery  (C9)  Stunted or Stressed Plants (D1)  Geomorphic Position (D2)  Stunted or Stressed Plants (D1)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Microtopographic Relief (D4)  Indicators of  wetland  hydrology  present?  No  Depth (inches):  Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						A STATE OF THE STA	
Water Marks (B1)			201-120-11-20				
Sediment Deposits (B2)  Drift Deposits (B3)  Roots (C3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Iron Deposits (B5)  Recent Iron Reduction in Tilled  Inundation Visible on Aerial  Imagery (B7)  Sparsely Vegetated Concave  Surface (B8)  Field Observations:  Surface water present?  Ves No Depth (inches):  No Depth (inches):  Saturation Visible on Aerial Imagery (B7)  Indicators of Water table present?  Yes No Depth (inches):  Indicators of wetland  Saturation present?  Yes No Depth (inches):  Indicators of wetland  hydrology  present?  No Depth (inches):  Secribe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	- 15 T T T T T T T T T T T T T T T T T T		and the second s	4	1112	THE PROPERTY OF THE PARTY OF TH	51
Driff Deposits (B3) Roots (C3) Saturation Visible on Aerial Imagery Algal Mat or Crust (B4) Presence of Reduced Iron (C4) (C9) Iron Deposits (B5) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) Inundation Visible on Aerial Soils (C6) Geomorphic Position (D2) Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Sparsely Vegetated Concave Other (Explain in Remarks) FAC-Neutral Test (D5) Surface (B8) Microtopographic Relief (D4)  Field Observations: Surface water present? Yes No Depth (inches): Indicators of Water table present? Yes No Depth (inches): wetland Saturation present? Yes No Depth (inches): hydrology Includes capillary fringe)  Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						Charles and the control of the contr	21
Algal Mat or Crust (B4)  Iron Deposits (B5)  Recent Iron Reduction in Tilled  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface water present?  Yes No Depth (inches):  Saturation present?  Yes No Depth (inches):  Saturation present?  Yes No Depth (inches):  Saturation present?  Yes No Depth (inches):  Solication pres			A STATE OF THE STA	Living			Imagen
Iron Deposits (B5) Inundation Visible on Aerial Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)  FAC-Neutral Test (D5) Microtopographic Relief (D4)  Field Observations: Surface water present? Ves No Depth (inches): Saturation present? Yes No Depth (inches): Saturation present? Yes No Depth (inches): Settrace capillary fringe)  Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		The second secon		(C4)			illagery
Inundation Visible on Aerial Solls (C6) Geomorphic Position (D2) Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Sparsely Vegetated Concave Other (Explain in Remarks) FAC-Neutral Test (D5) Microtopographic Relief (D4)  Field Observations: Surface water present? Yes No Depth (inches): Indicators of Water table present? Yes No Depth (inches): wetland Saturation present? Yes No Depth (inches): hydrology includes capillary fringe)  Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							(D1)
Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Surface (B8) FAC-Neutral Test (D5) Microtopographic Relief (D4)  Field Observations: Surface water present? Yes No Depth (inches): Vater table present? Yes No Depth (inches): Saturation present? Yes No D			, coocast in t	,,,,,,			(m.14)
Sparsely Vegetated Concave Surface (B8)  Cher (Explain in Remarks)  FAC-Neutral Test (D5) Microtopographic Relief (D4)  Field Observations: Surface water present? Yes No Depth (inches): Nater table present? Yes No Depth (inches): Saturation present? Yes No Depth (inches): Security of the control	The second secon		Surface (C7)			APPLICATION OF THE PROPERTY OF	
Surface (B8)  Field Observations: Surface water present? Yes No Depth (inches): Indicators of Water table present? Yes No Depth (inches): wetland hydrology includes capillary fringe)  Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					_	and the second s	
Field Observations: Surface water present? Yes No Depth (inches): Indicators of Water table present? Yes No Depth (inches): wetland hydrology present? Yes No Depth (inches): present? No Depth (inches): N			ani in iveniaries,				ii.
Surface water present? Yes No Depth (inches): Indicators of Wetland Saturation present? Yes No Depth (inches): Wetland Saturation present? Yes No Depth (inches): Hydrology present? No Depth (inches): Present? No Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						SERESISPINA DESTRUCTOR	,
Vater table present?  Yes No Depth (inches): wetland hydrology present?  Includes capillary fringe)  Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	field Observations:						
Saturation present? Yes No Depth (inches): hydrology present? N  Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Surface water present? Yes	No	Depth (inches	3):		Indicators of	
includes capillary fringe) present? N Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Vater table present? Yes	No	Depth (inches	3):		wetland	
includes capillary fringe) present? N Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Saturation present? Yes	No	Depth (inches	3):		hydrology	
	includes capillant frings)	- 20			4.4	present? N	
	includes capillary infige)						
	microdes capillary intige)	nonitoring well, ae	rial photos, pre	evious insp	ections), if a	vailable:	
Remarks:							
Remarks:	Describe recorded data (stream gauge, r						
тетагку:	Describe recorded data (stream gauge, r						
	Describe recorded data (stream gauge, r						
	Describe recorded data (stream gauge, r						

EGETATION - Use scientific names of p	lants			Sampling Point:	T2P4
				50/20 Thresholds	are married
Tree Stratum Plot Size (	Absolu				0% 50%
The didding the dect	% Cov	er Species	Status	Tree Stratum	21 53
Acer negundo	80	Y	FAC	Sapling/Shrub Stratum	11 28
2 Populus tremuloides	20	N	FAC	Herb Stratum	22 54
3 Pinus strobus	- 5	N	FACU	Woody Vine Stratum	0 0
4				Trocky Time Stratem	
5				Dominance Test Worksheet	
6				The second second second second second second second second	
				Number of Dominant	
7				Species that are OBL,	. T. W.
8				FACW, or FAC:	3 (A)
9	- 12			Total Number of Dominant	
0				Species Across all Strata:	4 (B)
	105	= Total Cov	er	Percent of Dominant	
		-,		Species that are OBL.	
0-1-10-1	No. of Co.	e Banker	C 10.00000		C 0004 14 10
Sapling/Shrub Plot Size (	Absolu	The state of the s	W. W. W. W. C. Connection of the Connection of t	FACW, or FAC: 7	5.00% (A/B
Stratum	% Cov	er Species	Status		
Rhamnus cathartica	30	Y	FAC	Prevalence Index Worksheet	
2 Lonicera tatarica	20	Y	FACU	Total % Cover of	
		_		A Company of the Comp	
Picea glauca	5	N	FACU	OBL species 0 x 1 =	
		3 -		FACW species 1 x 2 =	2
5				FAC species 210 x 3 =	630
8				FACU species 51 x 4 =	204
7				UPL species 5 x 5 =	25
				Column totals 267 (A)	861 (B)
				Prevalence Index = B/A =	3.22
- N	_		-	Prevalence index - b/A -	3.22
0		_			
	55	= Total Cov	er		
				Hydrophytic Vegetation Indic	ators:
Hart States British	Absolu	te Dominan	t Indicator	Rapid test for hydrophytic v	regetation
Herb Stratum Plot Size (	% Cov	er Species	Status	X Dominance test is >50%	3
1 Rhamnus cathartica	80	Y	FAC	Prevalence index is ≤3.0*	
2 Lonicera tatarica	20	- N	FACU		Carlo State
Name and the second sec				Morphogical adaptations* (	
3 Carex albicans	5	N	UPL	supporting data in Remarks	s or on a
4 Solidago flexicaulis	1	N	FACU	separate sheet)	
5 Ulmus americana		N	FACW	Problematic hydrophytic ve	getation*
6		N		(explain)	
7				findjeators of hydric sail and wetland h	a taulo vinistorio
8	100		-	present, unless disturbed or problems	
9				present amos analyses of problems	10
The state of the s			-	B-Folking - FUS - Life - G	¥6.
			-	Definitions of Vegetation Stra	ita:
1				Tree Woody plants 3 in (7 6 cm) or a	nore in clamaks
2	1/2			breast freight (DBH), regardless of her	
3		2012		Strain Landin Description and an inch	
4	1/4	- 1		Sapling/shrub - Woody plants less tre	m S m DBH ere
5				greater than 3.28 ft (1 m) tall.	
ñ.	108	= Total Cov	or	- 120 min 10-1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	108	TOTAL COV	Ci	Herb All herbeceous (non woody) pla	ants, regardless
GC-AVA-A	46 - 37	N 53.3	3.00-3.0	size, and woody plants less than 3.70	
Woody Vine Plot Size (	Absolu	and the second second			
Stratum	% Cov	er Species	Status	Woody vines - All woody vines greate	rithan 3 28 ft in
				bolght	4
2				2	
ī	_				
2				1. 307. 277	
				Hydrophytic	
				vegetation	
5	0	= Total Cov	er	present? Y	
5	-		7		
5				1	
5 emarks: (Include photo numbers here or on a s	eparate sheet)				
	eparate sheet)				
	eparate sheet)				
	eparate sheet)				
	eparate sheet)				
	eparate sheet)				

Denth		be to the	e depth needed t	to docu	ment the in	ndicato	or or confirm the abse	ence of indicators.)
the second second	Depth Matrix Redox Fo					0.52	Texture	Remarks
(Inches)	Color (moist)	%	Color (moist) % Type*			Loc**	00.0000	
0-3 3-18+	10YR 4/2	100			-	-	Loam	Court Count
3-18+	10YR 5/3	100			1	-	Loamy sand	Some Gravel
			1		11 11	-		
				-	10 00 5			
					14-3-1			
	-				1 - 1			-
			/					-
		-		-	LET 7			
				d Matr	ix, CS=Cov	vered o	or Coated Sand Grain	ns
Location:	PL=Pore Lining,	M=Mat	rix					
ydric Soi	Indicators:						Indicators for P	roblematic Hydric Solls:
146	ASSESSMENT.		Det	now have t	notice nod		O am Minch /	440V // BB // 1 - 841 BA 440B
	tisol (A1) tic Epipedon (A2	1		100	Below Surf R, MLRA			A10) (LRR K, L, MLRA 149B Redox (A16) (LRR K, L, R)
_	ck Histic (A3)	-1			Surface (S		The state of the s	Peat or Peat (S3) (LRR K, L, R)
	drogen Sulfide (A	(4)			LRA 149B			e (S7) (LRR K, L
Str	atitled Lavers (At	5)	loa	my Mu	cky Minera	al (F1)	Polyvalue Be	
	atified Layers (Af				cky Minera	al (F1)		elow Surface (S8) (LRR K, L)
De	pleted Below Dar	rk Sufac	e (A11)(LR	RK, L	)		Thin Dark St	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L)
De		rk Sufac (A12)	e (A11)(LR Loa	R K, L my Gle	- 1	(F2)	Thin Dark Su Iron-Mangar	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R
De Thi Sai	pleted Below Dai ck Dark Surface ndy Mucky Miner ndy Gleyed Matri	rk Sufac (A12) al (S1)	ce (A11)(LR Loa Red	R K, L my Gle bleted N lox Dar	yed Matrix Matrix (F3) k Surface	(F2) (F6)	Thin Dark Su Iron-Mangar Piedmont Flo Mesic Spodi	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149 c (TA6) (MLRA 144A, 145, 149E
De Thi Sai Sai Sai	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5)	rk Sufac (A12) ral (S1) ix (S4)	te (A11) (LR Loa Dep Red Dep	R K, L my Gle bleted M dox Dar bleted D	) yed Matrix Matrix (F3) k Surface Oark Surfac	(F2) (F6) ce (F7)	Thin Dark St Iron-Mangar Piedmont Flo Mesic Spodi Red Parent I	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149 c (TA6) (MLRA 144A, 145, 149E Material (F21)
De Thi Sai Sai Stri	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) pped Matrix (S6)	rk Sufac (A12) ral (S1) ix (S4)	ce (A11) (LR Loa Dep Red Dep Red	R K, L my Gle bleted M dox Dar bleted D	yed Matrix Matrix (F3) k Surface	(F2) (F6) ce (F7)	Thin Dark Still Iron-Mangar Piedmont Flom Mesic Spodi Red Parent I Very Shallov	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149 c (TA6) (MLRA 144A, 145, 149E Material (F21) v Dark Surface (TF12)
De Thi Sai Sai Sai Stri	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) ipped Matrix (S6) rk Surface (S7) (	rk Sufac (A12) ral (S1) ix (S4)	ce (A11) (LR Loa Dep Red Dep Red	R K, L my Gle bleted M dox Dar bleted D	) yed Matrix Matrix (F3) k Surface Oark Surfac	(F2) (F6) ce (F7)	Thin Dark Still Iron-Mangar Piedmont Flom Mesic Spodi Red Parent I Very Shallov	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149 c (TA6) (MLRA 144A, 145, 149E Material (F21)
De Thi Sai Sai Stri Dai	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) pped Matrix (S6) rk Surface (S7) ( 98)	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Still Iron-Mangar Piedmont Flomesic Spodi Red Parent I Very Shallov Other (Explain	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 1498 Material (F21) v Dark Surface (TF12) nin in Remarks)
De Thi Sai Sai Stri Dai	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) pped Matrix (S6) rk Surface (S7) ( 98)	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Still Iron-Mangar Piedmont Flom Mesic Spodi Red Parent I Very Shallov	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 1498 Material (F21) v Dark Surface (TF12) nin in Remarks)
De Thi Sar Sar Stri Da 148	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) pped Matrix (S6) rk Surface (S7) ( 98)	rk Sufac (A12) ral (S1) ix (S4) ) LRR R,	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Still Iron-Mangar Piedmont Flomesic Spodi Red Parent I Very Shallov Other (Explain	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149) c (TA6) (MLRA 144A, 145, 1498 Material (F21) v Dark Surface (TF12) nin in Remarks)
De Thi Sai Sai Sai Stri Dai 148	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) pped Matrix (S6) rk Surface (S7) ( 98)	rk Sufac (A12) al (S1) ix (S4) ) LRR R, egetatio	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Si Iron-Mangar Piedmont Flo Mesic Spodi Red Parent I Very Shallov Other (Expla	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149 o (TA6) (MLRA 144A, 145, 149E Material (F21) v Dark Surface (TF12) nin in Remarks) r problematic
De Thi Sai Sai Stri Dai 148 Indicators	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) ipped Matrix (S6) rk Surface (S7) (i BB) of hydrophytic ve	rk Sufac (A12) al (S1) ix (S4) ) LRR R, egetatio	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Still Iron-Mangar Piedmont Flomesic Spodi Red Parent I Very Shallov Other (Explain	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149) o (TA6) (MLRA 144A, 145, 1498 Material (F21) v Dark Surface (TF12) nin in Remarks) r problematic
De Thi Sai Sai Stri Dai 148 Indicators	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) ipped Matrix (S6) rk Surface (S7) (i BB) of hydrophytic ve	rk Sufac (A12) al (S1) ix (S4) ) LRR R, egetatio	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Si Iron-Mangar Piedmont Flo Mesic Spodi Red Parent I Very Shallov Other (Expla	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149 o (TA6) (MLRA 144A, 145, 149E Material (F21) v Dark Surface (TF12) nin in Remarks) r problematic
De Thi Sai Sai Stri Dai 145 Indicators Restrictive Type:	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) ipped Matrix (S6) rk Surface (S7) (i BB) of hydrophytic ve	rk Sufac (A12) al (S1) ix (S4) ) LRR R, egetatio	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Si Iron-Mangar Piedmont Flo Mesic Spodi Red Parent I Very Shallov Other (Expla	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149 o (TA6) (MLRA 144A, 145, 149E Material (F21) v Dark Surface (TF12) nin in Remarks) r problematic
De Thi Sai Sai Stri Dai 145 Indicators	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) ipped Matrix (S6) rk Surface (S7) (i BB) of hydrophytic ve	rk Sufac (A12) al (S1) ix (S4) ) LRR R, egetatio	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Si Iron-Mangar Piedmont Flo Mesic Spodi Red Parent I Very Shallov Other (Expla	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R codplain Soils (F19) (MLRA 149 c (TA6) (MLRA 144A, 145, 149E Material (F21) v Dark Surface (TF12) nin in Remarks) r problematic
De Thi Sai Sai Stri Dai 145 Indicators	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) ipped Matrix (S6) rk Surface (S7) (i BB) of hydrophytic ve	rk Sufac (A12) al (S1) ix (S4) ) LRR R, egetatio	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Si Iron-Mangar Piedmont Flo Mesic Spodi Red Parent I Very Shallov Other (Expla	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, F podplain Soils (F19) (MLRA 148 c (TA6) (MLRA 144A, 145, 149 Material (F21) v Dark Surface (TF12) in in Remarks) r problematic
De Thi Sai Sai Stri Dai 145 Indicators	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) ipped Matrix (S6) rk Surface (S7) (i BB) of hydrophytic ve	rk Sufac (A12) al (S1) ix (S4) ) LRR R, egetatio	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Si Iron-Mangar Piedmont Flo Mesic Spodi Red Parent I Very Shallov Other (Expla	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149 of (TA6) (MLRA 144A, 145, 149) Material (F21) v Dark Surface (TF12) uin in Remarks) r problematic
De Thi Sai Sai Stri Dai 145 indicators estrictive ype:	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) ipped Matrix (S6) rk Surface (S7) (i BB) of hydrophytic ve	rk Sufac (A12) al (S1) ix (S4) ) LRR R, egetatio	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Si Iron-Mangar Piedmont Flo Mesic Spodi Red Parent I Very Shallov Other (Expla	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149 of (TA6) (MLRA 144A, 145, 149) Material (F21) v Dark Surface (TF12) uin in Remarks) r problematic
De Thi Sai Sai Stri Dai 145 Indicators	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) ipped Matrix (S6) rk Surface (S7) (i BB) of hydrophytic ve	rk Sufac (A12) al (S1) ix (S4) ) LRR R, egetatio	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Si Iron-Mangar Piedmont Flo Mesic Spodi Red Parent I Very Shallov Other (Expla	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R codplain Soils (F19) (MLRA 149 c (TA6) (MLRA 144A, 145, 149E Material (F21) v Dark Surface (TF12) nin in Remarks) r problematic
De Thi Sai Sai Stri Dai 145 Indicators	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) ipped Matrix (S6) rk Surface (S7) (i BB) of hydrophytic ve	rk Sufac (A12) al (S1) ix (S4) ) LRR R, egetatio	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Si Iron-Mangar Piedmont Flo Mesic Spodi Red Parent I Very Shallov Other (Expla	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R codplain Soils (F19) (MLRA 149 c (TA6) (MLRA 144A, 145, 149 Material (F21) v Dark Surface (TF12) nin in Remarks) r problematic
De Thi Sai Sai Stri Dai 145 Indicators Restrictive Type:	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) ipped Matrix (S6) rk Surface (S7) (i BB) of hydrophytic ve	rk Sufac (A12) al (S1) ix (S4) ) LRR R, egetatio	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Si Iron-Mangar Piedmont Flo Mesic Spodi Red Parent I Very Shallov Other (Expla	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R codplain Soils (F19) (MLRA 149 c (TA6) (MLRA 144A, 145, 149 Material (F21) v Dark Surface (TF12) nin in Remarks) r problematic
De Thi Sai Sai Stri Dai 148	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) ipped Matrix (S6) rk Surface (S7) (i BB) of hydrophytic ve	rk Sufac (A12) al (S1) ix (S4) ) LRR R, egetatio	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Si Iron-Mangar Piedmont Flo Mesic Spodi Red Parent I Very Shallov Other (Expla	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149 of (TA6) (MLRA 144A, 145, 149) Material (F21) v Dark Surface (TF12) uin in Remarks) r problematic
De Thi Sai Sai Stri Dai 145 Indicators	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) ipped Matrix (S6) rk Surface (S7) (i BB) of hydrophytic ve	rk Sufac (A12) al (S1) ix (S4) ) LRR R, egetatio	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Si Iron-Mangar Piedmont Flo Mesic Spodi Red Parent I Very Shallov Other (Expla	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R podplain Soils (F19) (MLRA 149 of (TA6) (MLRA 144A, 145, 149) Material (F21) v Dark Surface (TF12) uin in Remarks) r problematic
De Thi Sai Sai Stri Dai 145 indicators estrictive ype:	pleted Below Dar ck Dark Surface ndy Mucky Miner ndy Gleyed Matri ndy Redox (S5) ipped Matrix (S6) rk Surface (S7) (i BB) of hydrophytic ve	rk Sufac (A12) al (S1) ix (S4) ) LRR R, egetatio	ee (A11) (LR	R K, L; my Gle bleted M dox Dar bleted D dox Der	) yed Matrix Natrix (F3) k Surface Park Surfac pressions (	(F2) (F6) ce (F7) (F8)	Thin Dark Si Iron-Mangar Piedmont Flo Mesic Spodi Red Parent I Very Shallov Other (Expla	elow Surface (S8) (LRR K, L) urface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, F podplain Soils (F19) (MLRA 148 c (TA6) (MLRA 144A, 145, 149 Material (F21) v Dark Surface (TF12) in in Remarks) r problematic

Project/Site: Witte Wetland/Library La	ike	City/County:	Cumberland/Ba	erron Sampling Date: 06/16/2015
Applicant/Owner: Beaver Dam Lake M	anagement District		State: Wiscon	isin Sampling Point T1P1 Wetlan
Investigator(s): Jason Naber, Mike Maje	ski		Section, Towns	hlp, Range:
Landform (hillslope, terrace, etc.):			cal relief (concav	re, convex, none):
Slope (%): Lat.: -92.026	Long.:	45.531	Datum:	
Soil Map Unit Name				/I Classification:
Are climatic/hydrologic conditions of the	site typical for this	time of the yea	ir?(lf)	no, explain in remarks)
	or hydrology	significant	ly disturbed?	Are "normal
	or hydrology	naturally p	problematic?	circumstances" present?
(If needed, explain any answers in remain	rks)	-		
SUMMARY OF FINDINGS				
Hydrophytic vegetation present?	v	is the sample	ed area within a	wetland?
Hydric soil present?	<del>-</del>	is the sample	d alca Willing a	wettaria:
Indicators of wetland hydrology present?	Y	If yes, optiona	I wetland site ID:	
Remarks: (Explain alternative procedure	s here or in a sepa	rate report.)		
Tremains, (Explain alternative procession	o tiere or in a sepa	ida iopoit.		
THE SECTION				
HYDROLOGY				
			Sec	condary Indicators (minimum of two
Primary Indicators (minimum of one is re				uired)
Surface Water (A1)		ed Leaves (B9)		Surface Soil Cracks (B6)
X High Water Table (A2)	Aquatic Fau	na (B13)		Drainage Patterns (B10)
X Saturation (A3)	Marl Deposi	and the second s		Moss Trim Lines (B16)
Water Marks (B1)	Hydrogen S	ulfide Odor (C1	)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Oxidized Rh	izospheres on	Living	Crayfish Burrows (C8)
Drift Deposits (B3)	Roots (C3)			Saturation Visible on Aerial Imagery
Algal Mat or Crust (B4)	The second secon	Reduced Iron	The state of the s	(C9)
Iron Deposits (B5)	Recent Iron	Reduction in Ti	lled	Stunted or Stressed Plants (D1)
Inundation Visible on Aerial	Soils (C6)			Geomorphic Position (D2)
Imagery (B7)	Thin Muck S	Surface (C7)		Shallow Aquitard (D3)
Sparsely Vegetated Concave	Other (Expla	ain in Remarks)		FAC-Neutral Test (D5)
Surface (B8)				Microtopographic Relief (D4)
Field Observations:			-	V
Surface water present? Yes	No X	Depth (inches	A:	Indicators of
Water table present? Yes X		Depth (inches		wetland
	_			Control of the contro
	No	Depth (inches	J	hydrology present?
(includes capillary fringe)				present? Y
Describe recorded data (stream gauge,	monitoring well ae	rial photos, pre	vious inspections	) if available
Describe recorded data (stream gauge, )	ne nom g won, ac	priocos, pro		M mar animalar
Remarks:				

EGETATION - Use scientific name					Sampling Point: T1P1 Wetlan 50/20 Thresholds
A CANADA SANCE	51	Absolute	Dominant	Indicator	20% 50%
Tree Stratum Plot Size (	)	% Cover	Species	Status	Tree Stratum 8 20
4 populus tlattaidas		15	Y	FAC	Sapling/Shrub Stratum 6 15
1 populus deltoides					
2 Ulmus americana		10	Y	FACW	Herb Stratum 19 48
3 Fraxinus pennsylvanica		10	Y	FACW	Woody Vine Stratum 1 3
4 Salix nigra		5	N	OBL	CHECK E. C. L. C.
5		-			Dominance Test Worksheet
6	_	_			Number of Dominant
7	_	$\overline{}$	$\overline{}$		Species that are OBL.
	_				
8					FACW, or FAC: 6 (A)
9					Total Number of Dominant
0					Species Across all Strata: 6 (B)
-	_	40 :	= Total Cover		Percent of Dominant
CF - COVER - 3"		- 0.77 Carl	2/19/01/02	22,557	Species that are OBL,
Sapling/Shrub Plot Size (	1	Absolute	Dominant	Indicator	FACW, or FAC: 100.00% (A/B)
Stratum		% Cover	Species	Status	
Callin atom		15	Y	OBL	Prevalence Index Worksheet
Salix nigra					- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2 Rhamnus cathartica		5	N	FAC	Total % Cover of:
3 Lonicera tatarica		5	- N	FACU	OBL species 105 x 1 = 105
Viburnum opulus	$\overline{}$	5	N	FACW	FACW species 35 x 2 = 70
	_			TAGUI	
			_		FAC species 25 x 3 = 75
5					FACU species 5 x 4 = 20
	- 9				UPL species 0 x 5 = 0
3					Column totals 170 (A) 270 (B)
	_	$\overline{}$	$\overline{}$	$\overline{}$	Prevalence Index = B/A = 1,59
		$\overline{}$	$\overline{}$		Frevalence index - bin - 1.05
		30	<ul> <li>Total Cover</li> </ul>		
					Hydrophytic Vegetation Indicators:
to build at a bay area.		Absolute	Dominant	Indicator	Rapid test for hydrophytic vegetation
Herb Stratum Plot Size (	7	% Cover	Species	Status	X Dominance test is >50%
		49 - 20 - 20 - 20		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	The second secon
1carex lacustris		80	Y	OBL	X Prevalence index is ≤3.0*
2 impatiens capensis	_	10	N	FACW	Morphogical adaptations* (provide
3 Lysimachia terrestris		5	N	OBL	supporting data in Remarks or on a
4	_		$\overline{}$		separate sheet)
			$\overline{}$		
5					Problematic hydrophytic vegetation*
6					(explain)
7					findicators of hydric soil and wetland hydrology must be
8					present, unless disturbed or problematic
9			$\overline{}$	$\overline{}$	prezone any sa distalbed of probellicate
0				_	Definitions of Vegetation Strata:
					And the Application and Total Control
2	_	$\overline{}$			Tree Woody plants 3 in (7 6 cm) or more in diameter
			$\overline{}$		breast height (DSH), regardless of height
Particular Section 1997	_				AND THE STATE OF T
	_				Sapling/shrub - Woody plants less than 3 m. DBH and
5					greater than 3.28 ft (1 m) tall.
		95	= Total Cover		The second secon
					Herb All herbaceous (non woody) plants, regardless,
Mondy Mina		Absolute	Dominant	Indicator	size, and woody plants less than 3.70 ft fall
Woody Vine Plot Size (	1	2.14 - 4.14	Dominant	2-044-206-40	
Stratum	. ,	% Cover	Species	Status	Woody vines - All woody vines greater than 3:28 ft in
1 Vitis riparia		5	Y	FAC	boight
	_	$\overline{}$			
	_				. 30V . 20
					Hydrophytic
3			3		vegetation
		- 6	= Total Cover		
		5	- Total Cover		present? Y
emarks: (Include photo numbers here or	on a separ	ate sheet)			

0-3 3-10 10-24	pth Matrix Redox Features						Texture	Remarks
3-10						Loc**	V.	
	10YR 2/1	100	2 EVD E/0	40	C	- 14	Silt loam	
10-24	10YR 6/2 10YR 6/2	60 50	7.5YR 5/8 7.5YR 5/8	40 50	C	M	Loam Sand silt	
	1011072	30	7.511( 5/6	- 50	C	IVI	Sand-silt.	
	1							
	ncentration, D= L=Pore Lining,			d Matri	x, CS=C	overed o	or Coated Sand Grains	
lydric Soil li	ndicators:						Indicators for Probl	ematic Hydric Solls:
Thick Sand Sand Sand Stripp Dark	,	(A12) al (S1) x (S4) LRR R,	Loa Dep Reco	bleted M dox Dari bleted D dox Dep	yed Mati fatrix (F3 k Surfac Park Surf pressions	(F6) ace (F7) (F8)	Iron-Manganese Piedmont Floodp Mesic Spodic (T/ Red Parent Mate	rk Surface (TF12) Remarks)
Restrictive La	yer (if observe	d)					Hydric soil present	? Y
Depth (inches	s):							
Remarks:								

Project/Site: Witte Wetland/Library La	ike	City/County:	Cumberland/Barr	on Sampling Date: 06/16/2015	
Applicant/Owner: Beaver Dam Lake M	lanagement District		State: Wisconsii	n Sampling Point T2P1 Wetlan	
Investigator(s): Jason Naber, Mike Maje	ski		Section, Townshi	p, Range:	
Landform (hillslope, terrace, etc.):			cal relief (concave,	convex, none):	
Slope (%):Lat.: -92.026	Long.:	45.531	Datum:	0.000	
Soil Map Unit Name				Classification:	
Are climatic/hydrologic conditions of the				, explain in remarks)	
Are vegetation, soil,	or hydrology		ly disturbed?	Are "normal	
	or hydrology	naturally p	roblematic?	circumstances" present?	
(If needed, explain any answers in rema	rks)				
SUMMARY OF FINDINGS					
Hydrophytic vegetation present?	Y	Is the sample	d area within a we	etland? Y	
Hydric soil present?	_ Y				
Indicators of wetland hydrology present?	YY	If yes, optiona	I wetland site ID:		
Remarks: (Explain alternative procedure	s here or in a sepa	rate report.)			
Newsconding of the second of the second of	7 24.0 D. A. Solden				
IN ARCHAEL					
HYDROLOGY			200	According to the second by	
in the second se		AT. 44		ndary Indicators (minimum of two	
Primary Indicators (minimum of one is re			requir	CONTRACTOR AND AND ADMINISTRATION OF THE PARTY OF THE PAR	
				urface Soil Cracks (B6)	
	X High Water Table (A2)Aquatic Fauna (B				
X Saturation (A3)			Moss Trim Lines (B16)		
- The state of the	Water Marks (B1) Hydrogen Sulfide Odor (C1		7		
Sediment Deposits (B2) Oxidized Rhizosphere		izospheres on L	on Living Crayfish Burrows (C8) Saturation Visible on Aerial Imagery		
Algal Mat or Crust (B4)	Drift Deposits (B3) Roots (C3) Algal Mat or Crust (B4) Presence of R			aturation visible on Aeriai imagery 29)	
		The second second second		tunted or Stressed Plants (D1)	
Inundation Visible on Aenal	Soils (C6)			ecomorphic Position (D2)	
Imagery (B7)		The second secon		hallow Aquitard (D3)	
			_	AC-Neutral Test (D5)	
Sparsely Vegetated Concave Surface (B8)	Other (Expla			Microtopographic Relief (D4)	
Surface (Bb)				icrotopographic Relief (D4)	
Field Observations:			4		
Surface water present? Yes	No X	Depth (inches	):	Indicators of	
Water table present? Yes X	_	Depth (inches		wetland	
Saturation present? Yes X	_	Depth (inches		hydrology	
(includes capillary fringe)		a a ban (mission		present? Y	
Describe recorded data (stream gauge,	monitoring well, aei	ial photos, pre	vious inspections),	if available:	
Remarks:					
Itemans.					

EGETATION - Use scientific names of pla	nts			Sampling Point: T2P1 Wetlar
Tree Stratum Plot Size ( 30 ) populus tremuloides Acer negundo	Absolute % Cover 40 10	Dominant Species Y Y	Indicator Status FAC FAC	50/20 Thresholds         20%         50%           Tree Stratum         10         25           Sapling/Shrub Stratum         2         4           Herb Stratum         22         54           Woody Vine Stratum         0         0
Sapling/Shrub	50 Absolute	= Total Cover	Indicator	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: 5 (A) Total Number of Dominant Species Across all Strata: 5 (B) Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)
Stratum Plot Size ( 15 )	% Cover	Species	Status	
1 Rhamnus cathartica 2 Viburnum dentatum 3 4 5 6 6 7 7 8 9 0 0	5 3	Y Y	FAC FAC	Prevalence Index Worksheet
Herb Stratum Plot Size ( 5 )  1 Phalaris arundinacea  2 Typha latifolia 3 Carex lacustris 4 Sagittaria latifolia 5 Mentha spicata 6	8 Absolute % Cover 100 5 1 1	= Total Cover  Dominant Species Y N N N N	Indicator Status FACW OBL OBL OBL FACW	Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation X Dominance test is >50% X Prevalence index is ≤3.0* Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain)  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
9	-	-		Definitions of Vegetation Strata:
1 2 3 4 5	$\equiv$	$\equiv$	$\equiv$	Tree: Woody plants 3 in: (7.6 cm) or more in diameter tareast freight (DBH), regardless of height.  Sapling/shrub: Woody plants less than 3 in: DBH and greeter than 3.28 ft (1 m) tall.
	108	= Total Cover		
Woody Vine Plot Size ( ) Stratum ( )	Absolute % Cover	Dominant Species	Indicator Status	Herb : All herbeceous (non-woody) plants, regardless; size, and woody plants less than 3.20 it fall:  Woody vines - All woody vines greater than 3.20 it in height.
3 4 5	三	$\equiv$	$\equiv$	Hydrophytic vegetation
	0	= Total Cover		present? Y

*Type: C=Concentr **Location: PL=Por Hydric Soil Indica  Histic Epip Black Histic Hydrogen S Stratified Li Depleted B Thick Dark	re Lining, M=Ma ators: 1) pedon (A2)	Redox Fe Color (moist) %  ion, RM=Reduced Mat	Type* Loc**	791 - 00 - 0 - 1 - 0 - 0	Remarks many roots gravel
*Type: C=Concentr **Location: PL=Por Hydric Soil Indica  Histisol (A' Histic Epipe Black Histir Hydrogen S Stratified Li Depleted B Thick Dark	tration, D=Depleter Lining, M=Malators:	ion, RM=Reduced Mat		Silty Sand or Coated Sand Grain	gravel
"Type: C=Concentr "Location: PL=Por Hydric Soil Indica Histic Epipe Black Histic Hydrogen S Stratified Li Depleted B Thick Dark	tration, D=Depletere Lining, M=Ma ators:	trix	rix, CS=Covered o	or Coated Sand Grain	gravel
Histisol (A1 Histisol (A1 Histic Epipe Black Histic Hydrogen S Stratified Li Depleted B Thick Dark	re Lining, M=Ma ators: 1) pedon (A2)	trix	rix, CS=Covered o	or Coated Sand Grain	
*Location: PL=Por lydric Soil Indica Histisol (A* Histic Epip Black Histic Hydrogen S Stratified Lis Depleted B Thick Dark	re Lining, M=Ma ators: 1) pedon (A2)	trix	rix, CS=Covered o	791 - 00 - 0 - 1 - 0 - 0	ns
*Location: PL=Por lydric Soil Indica Histisol (A* Histic Epip Black Histic Hydrogen S Stratified Lis Depleted B Thick Dark	re Lining, M=Ma ators: 1) pedon (A2)	trix	rix, CS=Covered o	791 - 00 - 0 - 1 - 0 - 0	ns
*Location: PL=Por lydric Soil Indica Histisol (A* Histic Epip Black Histic Hydrogen S Stratified Lis Depleted B Thick Dark	re Lining, M=Ma ators: 1) pedon (A2)	trix	rix, CS=Covered o	791 - 00 - 0 - 1 - 0 - 0	ns
Location: PL=Por ydric Soil Indica  Histisol (A1 Histic Epip Black Histic Hydrogen S Stratified Li Depleted B Thick Dark	re Lining, M=Ma ators: 1) pedon (A2)	trix	rix, CS=Covered o	791 - 00 - 0 - 1 - 0 - 0	ns
Location: PL=Por ydric Soil Indica  Histisol (A1 Histic Epip Black Histic Hydrogen S Stratified Li Depleted B Thick Dark	re Lining, M=Ma ators: 1) pedon (A2)	trix	rix, CS=Covered o	791 - 00 - 0 - 1 - 0 - 0	าร
Location: PL=Por ydric Soil Indica  Histisol (A1 Histic Epip Black Histic Hydrogen S Stratified Li Depleted B Thick Dark	re Lining, M=Ma ators: 1) pedon (A2)	trix	rix, CS=Covered o	791 - 00 - 0 - 1 - 0 - 0 - 0	ns
*Location: PL=Por lydric Soil Indica Histisol (A* Histic Epip Black Histic Hydrogen S Stratified Lis Depleted B Thick Dark	re Lining, M=Ma ators: 1) pedon (A2)	trix	rix, CS=Covered o	791 - 00 - 0 - 1 - 0 - 0 - 0	าร
Location: PL=Por ydric Soil Indica  Histisol (A1 Histic Epip Black Histic Hydrogen S Stratified Li Depleted B Thick Dark	re Lining, M=Ma ators: 1) pedon (A2)	trix	rix, CS=Covered o	791 - 00 - 0 - 1 - 0 - 0 - 0	ns
*Location: PL=Por lydric Soil Indica Histisol (A* Histic Epip Black Histic Hydrogen S Stratified Lis Depleted B Thick Dark	re Lining, M=Ma ators: 1) pedon (A2)	trix	trix, CS=Covered o	791 - 00 - 0 - 1 - 0 - 0 - 0	ns
*Location: PL=Por lydric Soil Indica Histisol (A* Histic Epip Black Histic Hydrogen S Stratified Lis Depleted B Thick Dark	re Lining, M=Ma ators: 1) pedon (A2)	trix	trix, CS=Covered o	791 - 00 - 0 - 1 - 0 - 0 - 0	ns
*Location: PL=Por lydric Soil Indica Histisol (A* Histic Epip Black Histic Hydrogen S Stratified Lis Depleted B Thick Dark	re Lining, M=Ma ators: 1) pedon (A2)	trix	uix, CS=Covered (	791 - 00 - 0 - 1 - 0 - 0 - 0	ns .
Histisol (A:  Histisol (A:  Histic Epipe Black Histic Hydrogen S Stratified Li  Depleted B Thick Dark	ators: 1) pedon (A2)			1007010009104	
Histisol (A1 Histic Epipe Black Histic Hydrogen S Stratified Li Depleted B Thick Dark	1) pedon (A2)	Palwyshia			Carlotte St. St. at Long St. St. Dill. Co.
Histic Epipi Black Histic Hydrogen S Stratified Li Depleted B Thick Dark	pedon (A2)	Dolwyshia		indicators for P	roblematic Hydric Solls:
Sandy Gley Sandy Red Stripped M Dark Surfar 149B) ndicators of hydro	Layers (A5) Below Dark Sufact Surface (A12) cky Mineral (S1) eyed Matrix (S4) dox (S5) Matrix (S6) ace (S7) (LRR R, ophytic vegetation	Loamy Mi (LRR K, I Loamy Gl X Depleted Redox Da Depleted Redox Da	leyed Matrix (F2) Matrix (F3) ark Surface (F6) Dark Surface (F7) epressions (F8)	Polyvalue Be Thin Dark St Iron-Mangan Piedmont Fic Mesic Spodi Red Parent I Very Shallov Other (Expla	
ype:	**************************************			Hydric soil pre	sent? Y
epth (inches):					

## **APPENDIX D: PHOTOS**



**Wetland Soil Profile** 



**Educational Sign in Adjacent Uplands.** 

## APPENDIX E: CLIMATOLOGY DATA

## **Precipitation Worksheet Using Gridded Database**

Precipitation data for target wetland location:			
county: Barron	township number: 35N		
township name: Cumberland	range number: 13W		
nearest community: Cumberland	section number: 6		

# Aerial photograph or site visit date: Wednesday, June 16<sup>th</sup>, 2015

## Score using 1971-2000 normal period

(values are in inches)	first prior month: June 2015	second prior month: May 2015	third prior month: April 2015
estimated precipitation total for this location:	4.10	4.10	2.08
there is a 30% chance this location will have less than: *	2.98	2.39	1.22
there is a 30% chance this location will have more than: *	4.73	3.80	2.74
type of month: dry normal wet	normal	wet	normal
monthly score	2 * 3 = 6	3 * 2 = 6	2 * 1 =2
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)		14 (normal)	

## Score using 1981-2010 normal period

multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)		12 (normal)	
monthly score	2 * 3 = 6	2 * 2 = 4	2 * 1 =2
type of month: dry normal wet	normal	normal	normal
there is a 30% chance this location will have more than: *	4.70	4.17	3.17
there is a 30% chance this location will have less than: *	2.86	2.48	1.45
estimated precipitation total for this location:	4.10	4.10	2.08
(values are in inches)	first prior month: June 2015	second prior month: May 2015	third prior month: April 2015